

#2 1/2

BATCH

## RAW SEQUENCE LISTING

DATE: 02/06/2001

PATENT APPLICATION: US/09/706,968

TIME: 14:31:54

Input Set : A:\706968.txt

Output Set: N:\CRF3\02062001\I706968.raw

ENTERED

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4 <110> APPLICANT: Gao, Zeren
5   Hart, Charles E.
6   Piddington, Christopher S.
7   Sheppard, Paul O.
8   Shoemaker, Kimberly E.
9   Gilbertson, Debra G.
10  West, James W.
12 <120> TITLE OF INVENTION: GROWTH FACTOR HOMOLOG ZVEGF3
14 <130> FILE REFERENCE: 98-60C1
16 <140> CURRENT APPLICATION NUMBER: US/09/706,968
17 <141> CURRENT FILING DATE: 2000-11-06
19 <150> PRIOR APPLICATION NUMBER: US/09/541,752
20 <151> PRIOR FILING DATE: 2000-03-31
22 <160> NUMBER OF SEQ ID NOS: 50
24 <170> SOFTWARE: FastSEQ for Windows Version 3.0
26 <210> SEQ ID NO: 1
27 <211> LENGTH: 1760
28 <212> TYPE: DNA
29 <213> ORGANISM: Homo sapiens
31 <220> FEATURE:
32 <221> NAME/KEY: CDS
33 <222> LOCATION: (154)...(1191)
35 <400> SEQUENCE: 1
36 attatgtgga aactaccctg cgattctctg ctgccagagc aggctcggcg cttccacccc      60
37 agtgcagcct tccctggcg gtggtgaaag agactcggga gtcgctgctt ccaaagtgcc      120
38 cgccgtgagt gagctctcac ccagtcagc caa atg agc ctc ttc ggg ctt ctc      174
39                                     Met Ser Leu Phe Gly Leu Leu
40                                     1           5
42 ctg ctg aca tct gcc ctg gcc ggc cag aga cag ggg act cag gcg gaa      222
43 Leu Leu Thr Ser Ala Leu Ala Gly Gln Arg Gln Gly Thr Gln Ala Glu
44      10           15           20
46 tcc aac ctg agt agt aaa ttc cag ttt tcc agc aac aag gaa cag aac      270
47 Ser Asn Leu Ser Ser Lys Phe Gln Phe Ser Ser Asn Lys Glu Gln Asn
48      25           30           35
50 gga gta caa gat cct cag cat gag aga att att act gtg tct act aat      318
51 Gly Val Gln Asp Pro Gln His Glu Arg Ile Ile Thr Val Ser Thr Asn
52      40           45           50           55
54 gga agt att cac agc cca agg ttt cct cat act tat cca aga aat acg      366
55 Gly Ser Ile His Ser Pro Arg Phe Pro His Thr Tyr Pro Arg Asn Thr
56      60           65           70
58 gtc ttg gta tgg aga tta gta gca gta gag gaa aat gta tgg ata caa      414
59 Val Leu Val Trp Arg Leu Val Ala Val Glu Glu Asn Val Trp Ile Gln
60      75           80           85
62 ctt acg ttt gat gaa aga ttt ggg ctt gaa gac cca gaa gat gac ata      462
63 Leu Thr Phe Asp Glu Arg Phe Gly Leu Glu Asp Pro Glu Asp Asp Ile
64      90           95           100
66 tgc aag tat gat ttt gta gaa gtt gag gaa ccc agt gat gga act ata      510

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67	Cys Lys Tyr Asp Phe Val Glu Val Glu Glu Pro Ser Asp Gly Thr Ile	
68	105 110 115	
70	tta ggg cgc tgg tgt ggt tct ggt act gta cca gga aaa cag att tct	558
71	Leu Gly Arg Trp Cys Gly Ser Gly Thr Val Pro Gly Lys Gln Ile Ser	
72	120 125 130 135	
74	aaa gga aat caa att agg ata aga ttt gta tct gat gaa tat ttt cct	606
75	Lys Gly Asn Gln Ile Arg Ile Arg Phe Val Ser Asp Glu Tyr Phe Pro	
76	140 145 150	
78	tct gaa cca ggg ttc tgc atc cac tac aac att gtc atg cca caa ttc	654
79	Ser Glu Pro Gly Phe Cys Ile His Tyr Asn Ile Val Met Pro Gln Phe	
80	155 160 165	
82	aca gaa gct gtg agt cct tca gtg cta ccc cct tca gct ttg cca ctg	702
83	Thr Glu Ala Val Ser Pro Ser Val Leu Pro Pro Ser Ala Leu Pro Leu	
84	170 175 180	
86	gac ctg ctt aat aat gct ata act gcc ttt agt acc ttg gaa gac ctt	750
87	Asp Leu Leu Asn Asn Ala Ile Thr Ala Phe Ser Thr Leu Glu Asp Leu	
88	185 190 195	
91	att cga tat ctt gaa cca gag aga tgg cag ttg gac tta gaa gat cta	798
92	Ile Arg Tyr Leu Glu Pro Glu Arg Trp Gln Leu Asp Leu Glu Asp Leu	
93	200 205 210 215	
95	tat agg cca act tgg caa ctt ctt gcc aag gct ttt gtt ttt gga aga	846
96	Tyr Arg Pro Thr Trp Gln Leu Leu Gly Lys Ala Phe Val Phe Gly Arg	
97	220 225 230	
99	aaa tcc aga gtg gtg gat ctg aac ctt cta aca gag gag gta aga tta	894
100	Lys Ser Arg Val Val Asp Leu Asn Leu Leu Thr Glu Glu Val Arg Leu	
101	235 240 245	
103	tac agc tgc aca cct cgt aac ttc tca gtg tcc ata agg gaa gaa cta	942
104	Tyr Ser Cys Thr Pro Arg Asn Phe Ser Val Ser Ile Arg Glu Glu Leu	
105	250 255 260	
107	aag aga acc gat acc att ttc tgg cca ggt tgt ctc ctg gtt aaa cgc	990
108	Lys Arg Thr Asp Thr Ile Phe Trp Pro Gly Cys Leu Leu Val Lys Arg	
109	265 270 275	
111	tgt ggt ggg aac tgt gcc tgt tgt ctc cac aat tgc aat gaa tgt caa	1038
112	Cys Gly Gly Asn Cys Ala Cys Cys Leu His Asn Cys Asn Glu Cys Gln	
113	280 285 290 295	
115	tgt gtc cca agc aaa gtt act aaa aaa tac cac gag gtc ctt cag ttg	1086
116	Cys Val Pro Ser Lys Val Thr Lys Lys Tyr His Glu Val Leu Gln Leu	
117	300 305 310	
119	aga cca aag acc ggt gtc agg gga ttg cac aaa tca ctc acc gac gtg	1134
120	Arg Pro Lys Thr Gly Val Arg Gly Leu His Lys Ser Leu Thr Asp Val	
121	315 320 325	
123	gcc ctg gag cac cat gag gag tgt gac tgt gtg tgc aga ggg agc aca	1182
124	Ala Leu Glu His His Glu Glu Cys Asp Cys Val Cys Arg Gly Ser Thr	
125	330 335 340	
127	gga gga tag ccgcatcacc accagcagct cttgccaga gctgtgcagt	1231
128	Gly Gly	
129	345	
131	gcagtggctg attctattag agaacgtatg cgttatctcc atccttaatc tcagttgttt	1291
132	gcttcaagga cctttcatct tcaggattta cagtgcatc tgaaagagga gacatcaaac	1351

RAW SEQUENCE LISTING  
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133 agaattagga gttgtgcaac agctcttttg agaggaggcc taaaggacag gagaaaaggt 1411
134 cttcaatcgt ggaaagaaaa ttaaattgttg tattaatatag atcaccagct agtttcagag 1471
135 ttaccatgta cgtattccac tagctgggtt ctgtatttca gttctttcga tacggcttag 1531
136 ggtaatgtca gtacaggaaa aaaactgtgc aagttagcac ctgattccgt tgccttgctt 1591
137 aactctaaag ctccatgtcc tgggcctaaa atcgtataaa atctggattt tttttttttt 1651
138 tttttgctca tattcacata tgtaaaccag aacattctat gtactacaaa cctggttttt 1711
139 aaaaaggaac tatgttgcta tgaattaaac ttgtgtcgtg ctgatagga 1760
141 <210> SEQ ID NO: 2
142 <211> LENGTH: 345
143 <212> TYPE: PRT
144 <213> ORGANISM: Homo sapiens
146 <400> SEQUENCE: 2
147 Met Ser Leu Phe Gly Leu Leu Leu Leu Thr Ser Ala Leu Ala Gly Gln
148 1 5 10 15
149 Arg Gln Gly Thr Gln Ala Glu Ser Asn Leu Ser Ser Lys Phe Gln Phe
150 20 25 30
151 Ser Ser Asn Lys Glu Gln Asn Gly Val Gln Asp Pro Gln His Glu Arg
152 35 40 45
153 Ile Ile Thr Val Ser Thr Asn Gly Ser Ile His Ser Pro Arg Phe Pro
154 50 55 60
155 His Thr Tyr Pro Arg Asn Thr Val Leu Val Trp Arg Leu Val Ala Val
156 65 70 75 80
157 Glu Glu Asn Val Trp Ile Gln Leu Thr Phe Asp Glu Arg Phe Gly Leu
158 85 90 95
159 Glu Asp Pro Glu Asp Asp Ile Cys Lys Tyr Asp Phe Val Glu Val Glu
160 100 105 110
161 Glu Pro Ser Asp Gly Thr Ile Leu Gly Arg Trp Cys Gly Ser Gly Thr
162 115 120 125
163 Val Pro Gly Lys Gln Ile Ser Lys Gly Asn Gln Ile Arg Ile Arg Phe
164 130 135 140
165 Val Ser Asp Glu Tyr Phe Pro Ser Glu Pro Gly Phe Cys Ile His Tyr
166 145 150 155 160
167 Asn Ile Val Met Pro Gln Phe Thr Glu Ala Val Ser Pro Ser Val Leu
168 165 170 175
169 Pro Pro Ser Ala Leu Pro Leu Asp Leu Leu Asn Asn Ala Ile Thr Ala
170 180 185 190
171 Phe Ser Thr Leu Glu Asp Leu Ile Arg Tyr Leu Glu Pro Glu Arg Trp
172 195 200 205
173 Gln Leu Asp Leu Glu Asp Leu Tyr Arg Pro Thr Trp Gln Leu Leu Gly
174 210 215 220
175 Lys Ala Phe Val Phe Gly Arg Lys Ser Arg Val Val Asp Leu Asn Leu
176 225 230 235 240
177 Leu Thr Glu Glu Val Arg Leu Tyr Ser Cys Thr Pro Arg Asn Phe Ser
178 245 250 255
179 Val Ser Ile Arg Glu Glu Leu Lys Arg Thr Asp Thr Ile Phe Trp Pro
180 260 265 270
181 Gly Cys Leu Val Lys Arg Cys Gly Gly Asn Cys Ala Cys Cys Leu
182 275 280 285
183 His Asn Cys Asn Glu Cys Gln Cys Val Pro Ser Lys Val Thr Lys Lys

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Input Set : A:\706968.txt

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```

184      290      295      300
185 Tyr His Glu Val Leu Gln Leu Arg Pro Lys Thr Gly Val Arg Gly Leu
186 305      310      315      320
187 His Lys Ser Leu Thr Asp Val Ala Leu Glu His His Glu Glu Cys Asp
188      325      330      335
189 Cys Val Cys Arg Gly Ser Thr Gly Gly
190      340      345

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192 <210> SEQ ID NO: 3
193 <211> LENGTH: 116
194 <212> TYPE: PRT
195 <213> ORGANISM: Artificial Sequence
197 <220> FEATURE:
198 <223> OTHER INFORMATION: peptide motif
200 <221> NAME/KEY: VARIANT
201 <222> LOCATION: (2)...(19)
202 <223> OTHER INFORMATION: Xaa is any amino acid
204 <221> NAME/KEY: VARIANT
205 <222> LOCATION: (20)...(34)
206 <223> OTHER INFORMATION: Xaa is any amino acid or not present
208 <221> NAME/KEY: VARIANT
209 <222> LOCATION: (36)...(36)
210 <223> OTHER INFORMATION: Xaa is any amino acid
212 <221> NAME/KEY: VARIANT
213 <222> LOCATION: (38)...(38)
214 <223> OTHER INFORMATION: Xaa is any amino acid
216 <221> NAME/KEY: VARIANT
217 <222> LOCATION: (40)...(45)
218 <223> OTHER INFORMATION: Xaa is any amino acid
220 <221> NAME/KEY: VARIANT
221 <222> LOCATION: (46)...(72)
222 <223> OTHER INFORMATION: Xaa is any amino acid or not present
224 <221> NAME/KEY: VARIANT
225 <222> LOCATION: (74)...(93)
226 <223> OTHER INFORMATION: Xaa is any amino acid
228 <221> NAME/KEY: VARIANT
229 <222> LOCATION: (94)...(113)
230 <223> OTHER INFORMATION: Xaa is any amino acid not present
232 <221> NAME/KEY: VARIANT
233 <222> LOCATION: (115)...(115)
234 <223> OTHER INFORMATION: Xaa is any amino acid
236 <400> SEQUENCE: 3

```

```

W--> 237 Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
238      1      5      10      15
W--> 239 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
240      20      25      30
W--> 241 Xaa Xaa Cys Xaa Gly Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
242      35      40      45
W--> 243 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
244      50      55      60

```

RAW SEQUENCE LISTING  
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Input Set : A:\706968.txt  
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```

W--> 245  Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa
      246  65              70              75              80
W--> 247  Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
      248              85              90              95
W--> 249  Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
      250              100              105              110
W--> 251  Xaa Cys Xaa Cys
      252              115
      254 <210> SEQ ID NO: 4
      255 <211> LENGTH: 24
      256 <212> TYPE: PRT
      257 <213> ORGANISM: Artificial Sequence
      259 <220> FEATURE:
      260 <223> OTHER INFORMATION: peptide motif
      262 <221> NAME/KEY: VARIANT
      263 <222> LOCATION: (2)...(2)
      264 <223> OTHER INFORMATION: Xaa is Lys or Arg
      266 <221> NAME/KEY: VARIANT
      267 <222> LOCATION: (4)...(4)
      268 <223> OTHER INFORMATION: Xaa is Asp, Asn or Glu
      270 <221> NAME/KEY: VARIANT
      271 <222> LOCATION: (5)...(5)
      272 <223> OTHER INFORMATION: Xaa is Trp, Tyr or Phe
      274 <221> NAME/KEY: VARIANT
      275 <222> LOCATION: (6)...(16)
      276 <223> OTHER INFORMATION: Xaa is any amino acid
      278 <221> NAME/KEY: VARIANT
      279 <222> LOCATION: (17)...(20)
      280 <223> OTHER INFORMATION: Xaa is any amino acid or not present
      282 <221> NAME/KEY: VARIANT
      283 <222> LOCATION: (22)...(22)
      284 <223> OTHER INFORMATION: Xaa is Lys or Arg
      286 <221> NAME/KEY: VARIANT
      287 <222> LOCATION: (23)...(23)
      288 <223> OTHER INFORMATION: Xaa is Trp, Tyr or Phe
      290 <400> SEQUENCE: 4
W--> 291  Cys Xaa Tyr Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
      292  1              5              10              15
W--> 293  Xaa Xaa Xaa Xaa Gly Xaa Xaa Cys
      294              20
      296 <210> SEQ ID NO: 5
      297 <211> LENGTH: 6
      298 <212> TYPE: PRT
      299 <213> ORGANISM: Artificial Sequence
      301 <220> FEATURE:
      302 <223> OTHER INFORMATION: peptide tag
      304 <400> SEQUENCE: 5
      305  Glu Tyr Met Pro Met Glu
      306  1              5

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VERIFICATION SUMMARY  
PATENT APPLICATION: US/09/706,968

DATE: 02/06/2001  
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Input Set : A:\706968.txt  
Output Set: N:\CRF3\02062001\I706968.raw

L:237 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:239 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:241 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:243 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:245 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:247 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:249 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:251 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:291 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4  
L:293 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4  
L:322 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:323 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:324 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:325 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:326 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:327 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:328 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:329 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:330 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:331 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:332 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:333 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:334 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:335 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:336 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:337 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:338 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:339 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:354 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
L:369 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8  
L:384 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:399 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10  
L:414 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11  
L:429 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:455 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14  
L:470 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15  
L:485 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16  
L:500 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17  
L:515 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18  
L:552 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21  
L:567 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22  
L:582 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23  
L:597 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24